CONTENTS

VOLUME 16 (1972)

The variation in UV sensitivity of four K12 strains of Escherichia coli as a function of	
their stage of growth by R. M. Tyrrell, S. H. Moss and D. J. G. Davies (Bath, Great Britain) (Rec'd Apr.	
4th, 1972)	1-12
Spontaneous and radiation-induced deletion mutations in Escherichia coli strains with different DNA repair capacities	
	13-25
A rapid method for complementation testing of ultraviolet-sensitive (UVS) mutants of Streptomyces coelicolor	
by R. J. HAROLD AND D. A. HOPWOOD (Norwich, Great Britain) (Rec'd Mar. 7th,	
1972)	27-34
Differential response of mutagenic effects to storage of barley seeds treated with propyl	
methanesulphonate and isopropyl methanesulphonate by T. Gichner and J. Velemínský (Prague, Czechoslovakia) (Rec'd Apr. 4th, 1971)	35-40
Chromosome aberrations induced by DEB in 5-aminouracil synchronised root meristems	33 40
of Vicia faba	
by Z. SWIETLINSKA (Warsaw, Poland) (Rec'd Mar. 29th, 1972)	41-47
Chromosomal interchange in mature oocytes of Drosophila	1- 1/
by D. R. PARKER AND N. BUSBY (Riverside, Calif.) (Rec'd Feb. 21st, 1972)	49-58
The cytogenetics of mutator gene-induced X-linked lethals in Drosophila melanogaster	
by M. M. Green and G. Lefevre (Davis, Calif.) (Rec'd Mar. 20th, 1972)	59-64
The effects of treating Drosophila females with actinomycin-D on the yields of dominant	
lethals, translocations and recessive lethals recovered from X-irradiated spermatozoa	E no
by J. P. Proust, K. Sankaranarayanan and F. H. Sobels (Leiden, The Netherlands)	
(Rec'd Apr. 7th, 1972)	65-76
A mutational assay system using the thymidine kinase locus in mouse lyphoma cells	
by D. CLIVE, W. G. FLAMM, M. R. MACHESKO AND N. J. BERNHEIM (Research Triangle	Q-
Park, N.C.) (Rec'd Mar. 20th, 1972)	77-87
II. Induction of gene mutations in Chinese hamster cells	
by N. I. Shapiro, A. E. Khalizev, E. V. Luss, E. S. Manuilova, O. N. Petrova and	
N. B. Varshaver (Moscow, U.S.S.R.) (Rec'd Mar. 30th, 1972)	89-101
Chromosome aberrations induced in human bone-marrow cells by the rapeutical local $\gamma$	
irradiation. Time and dose relationships	
by E. K. Pyatkin, N. N. Alexsandrov, A. I. Vorobyev, S. A. Petrova and I. I.	
Suskov (Moscow, U.S.S.R.) (Rec'd Mar. 24th, 1972)	103-109
Method for preparing anaphase figures from rat bone marrow	
by K. A. Palmer, F. Kelly-Garvert and M. S. Legator (Washington, D.C.) (Rec'd	
May 8th, 1972)	111-112
Stimulation of mutation in phase T <sub>4</sub> by lesions in gene 32 and by thymidine imbalance	
by C. Bernstein, H. Bernstein, S. Mufti and B. Strom (Tucson, Ariz.) (Rec'd May	
24th, 1972)	113-119
Analysis of photoenzymatic repair of UV lesions in DNA by single light flashes IX. Excess production of photoreactivating enzyme in $E.\ coli\ B_{8-1}$ -160 under different	
growth conditions, and its suppression by adenine	
by H. Nishioka and W. Harm (Tokyo, Japan and Dallas, Tex.) (Rec'd Apr. 18th,	
1972)	121-131
The action of caffeine on the survival of <i>Proteus mirabilis</i> and its virulent phage VIr after	- 3-
UV-irradiation and treatment with nitrogen mustard	
by W. Witte and H. Böнме (Halle/S. and Gatersleben, G.D.R.) (Rec'd May 24th,	
1972)	133-139

Mutagenicity of N-methylnitrosourea (NMU) and N-ethyl-nitrosourea (NEU) in the moss Pogonatum aloides (Hedw.) P. Beauv.	
by M. Franssen and J. Moutschen (Liège, Belgium) (Rec'd Apr. 19th, 1972) Ineffectivity of metallic salts in induction of somatic crossing-over and mutations in	
Glycine max L. (Merrill)	
by B. K. Vig and W. F. Mandeville (Reno, Nev.) (Rec'd May 17th, 1972) Mutagenitätsuntersuchungen mit DDT und den DDT-Metaboliten DDE, DDD, DDOM und DDA an <i>Drosophila melanogaster</i>	151-155
by E. Vogel (Freiburg i.Br., Germany) (Rec'd May 23rd, 1972)	157-164
phloxine, a mutagenic red dye detected by T. Kada, K. Tutikawa and Y. Sadaie (Mishima, Japan) (Rec'd May 8th, 1972)	165 174
A characterization of repair mechanisms operating subsequent to genetic damage induced by ethyl methanesulfonate and gamma radiation in <i>Bracon hebetor</i>	
by A. C. Hoffman (Millersville, Pa.) (Rec'd May 8th, 1972)	175-188
Mutagenic activity of isoniazid and hydrazine in mammalian test systems	
by G. RÖHRBORN, P. PROPPING AND W. BUSELMAIER (Heidelberg, Germany) (Rec'd	-0
Apr. 25, 1972)	189–194
Transmutation of carbon-14 within DNA of <i>Drosophila melanogaster</i> spermatozoa by W. R. Lee, G. A. Sega and E. Sky Benson (Baton Rouge, La.) (Rec'd May 25th,	
1972)	105-201
Dosimetry of the chemical mutagen ethyl methanesulfonate in spermatozoan DNA from	195 201
Drosophila melanogaster by G. A. Sega, P. A. Gee and W. R. Lee (Baton Rouge, La.) (Rec'd May 25th, 1972)	202 272
Comparison of a chemical assay with a tissue-mediated bio-assay for chemical mutagens	203-213
by P. A. GEE, G. A. SEGA AND W. R. LEE (Baton Rouge, La.) (Rec'd Feb. 29th, 1972)	215-221
Behavior of quasi-bivalents formed by heterologous interchange at meiosis in the male	215-221
Drosophila	
by B. R. Golden and S. Zimmering (Saratoga Springs, N.Y. and Providence, R.I.)	
(Rec'd June 16th, 1972)	222-224
Mutation to prototrophy in Escherichia coli K-12: effect of broth on UV-induced	
mutation in strain AB1157 and four excision-deficient mutants	
by M. H. L. GREEN, M. A. ROTHWELL AND B. A. BRIDGES (Brighton, Great Britain)	
(Rec'd Jun. 6th, 1972)	225-234
Ultraviolet mutagenesis in repair-deficient derivatives of Escherichia coli B/r: uvrA recB	
and uvrA recC strains	
by E. M. WITKIN (New Brunswick, N.J.) (Rec'd Jun. 30th, 1972)	235-242
The effect of phosphate buffer on the differential response of two genes in Neurospora	
crassa to UV	
by M. J. Allison (Roslin, Great Britain) (Rec'd Jun. 5th, 1972)	243-248
UV-induced replicating instability in fission yeast Schizosaccharomyces pombe	
by N. P. Dubinin, O. N. Kurennaya, L. D. Kurlapova and V. A. Tarasov (Moscow,	
U.S.S.R.) (Rec'd May 29th, 1972)	249-264
Effects of N-ethyl-N-nitrosourea on populations of Chlorella cells	
by J. Nečas (Třeboň, Czechoslovakia) (Rec'd Feb. 14th, 1972)	265-278
Recombinational and mutational analyses of subspecific differentiation in Oryza sativa L.	
by C. B. Singh (New Delhi, India) (Rec'd Jun. 7th, 1972)	279-287
Behavioural mutagenesis in the convict cichlid fish, Cichlasoma nigrofasciatum Guenther	
I. The reduction of male aggressiveness in the first postirradiation generation	
by S. Holzberg and J. H. Schröder (München-Neuherberg, Germany) (Rec'd May	
8th, 1972)	289-296
Observation of dividing spermatocytes for chromosome aberrations induced in mouse	
spermatogonia by chemical mutagens	
by A. LÉONARD AND G. LINDEN (Mol, Belgium) (Rec'd Jun. 8th, 1972) Expression time and spontaneous mutability in the estimation of induced mutation	297-300
frequency following treatment of Chinese hamster cells by ultraviolet light	
by C. F. Arlett and S. A. Harcourt (Brighton, Great Britain) (Rec'd May 24th, 1972)	207 206
Chromosomenaberrationen menschlicher Lymphocyten nach Röntgenbestrahlung in vitro	301-300
I. Qualitative and quantitative Aspekte der Dosiswirkungsbeziehung	
by E. Schmid, M. Bauchinger and O. Hug (München-Neuherberg, Germany) (Rec'd	
May 30th, 1972)	307-317
Synergistic and antagonistic effects of caffeine on two strains of cellular slime mold	3-7 3-7
treated with alkylating agents	
by J. F. Payez and R. A. Deering (University Park, Pa.) (Rec'd Jul. 3rd, 1972)	218_221

Biological effects of combination treatments with ionizing radiation (X-rays) are	nd diethyl	
sulfate (dES) in barley by P. K. Mohan Rao (Kuala Lumpur, Malaysia) (Rec'd Jul. 3rd, 1972)		222 225
Mutagenic and antifertility activity of trimethylphosphate in <i>Drosophila melan</i>		322-327
by K. F. Dyer and P. J. Hanna (Clayton, Australia) (Rec'd Jul. 10th, 1972)		227-221
Chromosome damage in human cell cultures induced by metal salts	,	32/-331
by G. R. Paton and A. C. Allison (Harrow, Great Britain) (Rec'd Jul. 4th,	1072)	222-226
Inter- and intrachromosomal distribution of achromatic lesions and chromatid		332-330
human chromosomes	. Dieaks III	,
by G. Obe and H. Lüers (Berlin, Germany) (Rec'd Jun. 23rd, 1972)		227-220
Inhibition of virus-induced chromosome damage by interferon		337-339
	(Camdon	
by W. W. Nichols, C. Bradt, K. Paucker, L. Kjellén and E. Farrell	(Camden,	
N.J., Philadelphia, Pa., and Lund, Sweden) (Rec'd Jun. 6th, 1972)		
Announcement		344
The variation in photoreactivating enzyme activity as a function of the stage	or growth	
of three K12 strains of Escherichia coli		
by R. M. Tyrrell, S. H. Moss and D. J G. Davies (Bath, Great Britain) F		
23rd, 1972)		345-352
Epistatic interactions between four rad loci in yeast		
by J. C. GAME AND B. S. Cox (Oxford, Great Britain) (Rec'd Jul. 6th, 1972	)	353-362
Analysis of mutagen specificity in Drosophila melanogaster		
by P. T. Shukla (Edinburgh, Great Britain) (Rec'd Jun. 26th, 1972)		363-371
The cytogenetic effects of aflatoxin and gamma-rays on human leukocytes in		
by C. Promchainant, V. Baimai and A. Nondasuta (Bangkok, Thailand) (I		
27th, 1972)		373-380
The effect of methylazoxymethanol acetate on DNA synthesis and cell prolif	feration of	
synchronous HeLa cells		
by H. W. VAN DEN BERG AND C. R. BALL (Leeds, Great Britain) (Rec'd Jun. 2	26th, 1972)	381-390
The effect of caffeine on chromosomes of human lymphocytes; in vivo and in vi	itro studies	
by D. Weinstein, I. Mauer and H. M. Solomon (Nutley, N.J.) (Rec'd	Jun. 27th,	
1972)		
Die cytogenetische Wirkung von Blei in menschlichen peripheren Lymphocyt		
und in vivo		
by E. Schmid, M. Bauchinger, S. Pietruck and G. Hall (München, Germa	nv) (Rec'd	
Jun. 23rd, 1972)		
Chromosomenanalyse bei Verkehrspolizisten mit erhöhter Bleilast		
by M. Bauchinger, E. Schmid and D. Schmidt (München, Germany) (Rec'd	I Iun. 23rd	
1972)		
On the mutagenic action of dichlorvos		40/ 4
by C. E. Voogd, J. J. A. A. Jacobs and J. J. van der Stel (Bilthoven, T.	he Nether.	
lands) (Rec'd Jul. 6th, 1972)	no rectici	412-416
A new technique for using spermatia in the production of mutants in Podospo		413 410
by K. Esser and H. Prillinger (Bochum, Germany) (Rec'd Jul. 17th, 19		417-410
Abnormal DNA repair of 4-nitroquinoline-1-oxide-induced damage by lymp		
Xeroderma pigmentosum	nocytes in	
by A. J. Jacobs, R. L. O'Brien, J. W. Parker and P. Paolilli (Los Ange	olos Calif	
(Rec'd Jun. 13th, 1972)	antion often	420-424
	ection arter	5/
weaning progeny		
by E. R. Soares (Bar Harbor, Me.) (Rec'd Aug. 7th, 1972)		
A pilot screening study of chromosome breakage in cultured blood cells from	m newborr	1
infants	TT \ (T) 1	
by E. B. Hook, K. Healy, M. L. Powers and N. Hatcher (Albany, N.		
Aug. 18th, 1972)		428-430
Author Index		431-432
Subject Index		433-440
Author Index		441-443
Errata		. 444

## **ERRATA**

A. D. LAUMBACH AND I. C. FELKNER, Formation of a 4-nitroquinoline-1-oxide complex with DNA in normal and repair deficient strains of *Bacillus subtilis*, *Mutation Res.*, 15 (1972) 233-245.

p. 244, under ACKNOWLEDGMENTS the following statement should be added: Research included in the revision was supported by Public Health Service Research Grant No. 1 RO1 CA12717-01 from the National Cancer Institute.

Sheldon Wolff, The repair of X-ray-induced chromosome aberrations in stimulated and unstimulated human lymphocytes, *Mutation Res.*, 15 (1972) 435-444.

p. 438, legend for Fig. 1, 3rd line should read: number of grains per nucleus = 5.2. Labeling index = 91. B. 300 rad followed by H-amino

M. J. Allison, The effect of phosphate buffer on the differential response of two genes in *Neurospora crassa* to UV, *Mutation Res.*, 16 (1972) 243-248.

p. 245, Table I, heading 4th column should read:

$$\left(\frac{i^+}{a^+}\right)_w$$

Table II, last column, last number should read: 3.0 (instead of 3.6)

Mutation Res., 16 (1972) 444